FAST-NEUTRON SCATTERING CROSS SECTIONS OF ELEMENTAL SILVER

by

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ABSTRACT

Differential neutron elastic- and inelastic-scattering cross sections of elemental silver are measured from 1.5 to 4.0 MeV at intervals of $\lesssim$ 200 keV and at 10 to 20 scattering angles distributed between 20 and 160 deg. Inelastically-scattered neutron groups are observed corresponding to the excitation of levels at; 328 ± 13, 419 ± 50, 748 ± 25, 908 ± 26, 1150 ± 38, 1286 ± 25, 1507 ± 20, 1623 ± 30, 1835 ± 20 and 1944 ± 26 keV. The experimental results are used to derive an optical-statistical model that provides a good description of the observed cross sections. The measured values are compared with corresponding quantities given in ENDF/B-V.